

IN THE CLAIMS

1. (Currently amended) A semiconductor device comprising:

a semiconductor substrate;

a first portion comprising a plurality of active regions formed in the semiconductor substrate;

a plurality of isolation regions separating the active regions from each other;

a second portion comprising at least one trench having an interior surface formed by side surfaces and a bottom surface;

a surface insulating film formed on a surface of the active regions in the first portion and on the side surfaces and bottom surface lining the interior surface of said at least one trench in the second portion; and

a conductive film formed on the entire surface insulating film lining the trench, wherein the surface insulating film is sufficiently thin to function as an electric fuse.

2. (Previously Amended) The semiconductor device according to claim 1, further comprising:

a plurality of surface insulating films, having different thicknesses, formed on a surface of the active regions in the first portion and on the interior surface of said at least one trench in the second portion; and

a plurality of conductive films formed on each of the surface insulating films in the first portion;

wherein one of the surface insulating films has a smaller thickness than the other insulating films and is the insulating film which is formed on the interior surface of said at least one trench in the second portion and is capable of functioning as an electric fuse.

3. (Previously amended) The semiconductor device according to claim 1, wherein:
the plurality of insulating films are gate oxide films; and
the plurality of conductive films are gate electrodes.

4. (Currently amended) A semiconductor device comprising:
a semiconductor substrate;
at least a trench, having an interior surface formed by side surfaces and a bottom surface, formed in the semiconductor substrate;
a surface insulating film formed along the side surfaces and bottom surface lining the interior surface of the trench and the semiconductor substrate; and
a conductive film formed on the entire surface insulating film lining the trench;
wherein the surface insulating film is sufficiently thin to be broken down for forming an electric fuse.

5. (Cancelled)

6. (Previously amended) The semiconductor device according to claim 4, wherein a plurality of trenches are formed adjacently, and a surface insulating film and a conductive film are formed in each trench.

7. (Currently amended) A semiconductor device comprising:

a semiconductor substrate;

at least a trench, having an interior surface formed by side surfaces and a bottom surface,

formed in the semiconductor substrate;

a surface insulating film formed along the side surfaces and bottom surface lining the

interior surface of the trench and the semiconductor substrate; and

a conductive film formed on the surface insulating film;

wherein the surface insulating film is sufficiently thin to be broken down for forming an

electric fuse and The semiconductor device according to claim 6, wherein

a plurality of trenches are formed adjacently in the semiconductor substrate, an etching stopper film is embedded in a selected one of the trenches, and a surface insulating film and a conductive film are formed in other trenches.